QUIZZES

Unit Wise Test-2 (Biological Molecules and Enzymes)

30 Questions

25 min

Topics

Introduction to biological molecules, Importance of Water, Carbohydrates, Proteins, Lipids, Nucleic acids, Conjugated molecules, Introduction of Enzymes, Mechanism of enzyme action (Models), Factors affecting rate of enzyme action, Enzyme inhibition

Start Quiz

24 : 30

Q 1/30 25 min Hint

Q : Most abundant component of the cell is:

A Proteins

B Lipids

C Carbohydrates

D Water

1 2 3 4 5 6 7

24 : 28

Q 2/30 25 min Hint

Q : Living organisms use water as thermo-stabilizer, due to its _____ property:

A Heat of vaporization

B Heat capacity

C Heat of sublimation

D Heat of ionization

24 : 26

Q 3/30 25 min Hint

Q : Water flows freely without breaking apart due to its:

A Adhesive force

B Suspended force

C Cohesive force

D Additive force

1 2 3 4 5 6 7

24 : 24

Q 4/30 25 min Hint

Q : It is not a carbohydrate:

A Starch

B Glycogen

C Chitin

D Cutin

1 2 3 4 5 6 7

24 : 22

Q 5/30 25 min Hint

Q : Number of carbon atoms within the ring of ribo-furanose is:

A 6

B 5

C 4

D 3

24 : 20

Q 6/30 25 min Hint

Q : Monosaccharides are major components of:

A DNA, ATP, Ribulose biophasphate and cysteine

B DNA, NAD and Insulin

C DNA, NADP, ATP and ribulose bisphosphate

D DNA, RNA and myosin

1 2 3 4 5 6 7

24 : 18

Q 7/30 25 min Hint

Q : Milk sugar is a/an:

A Monosaccharide

B Oligosaccharide

C Disaccharide

D Polysaccharide

1 2 3 4 5 6 7

24 : 15

Q 8/30 25 min Hint

Q : It is a nitrogen containing polysaccharide:

A Starch

B Glycogen

C Cellulose

D Chitin

7 8 9 10 11 12 13

24 : 13

Q 9/30 25 min Hint

Q : It is an example of globular protein:

A Myosin

B Fibroin

C Fibrinogen

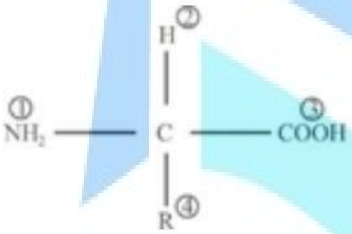
D Keratin

7 8 9 10 11 12 13

24 : 10

Q 10/30 25 min Hint

Q :
An amino acid molecule has the following structure:



Which two of the groups combine to form a peptide link?

A 1 and 2

B 1 and 3

C 2 and 3

D 3 and 4

7 8 9 10 11 12 13

24 : 08

Q 11/30 25 min Hint

Q : A protein is always _____ in nature:

A Fibrous

B Polypeptide

C Pentapeptide

D Hydrophobic

7 8 9 10 11 12 13

24 : 07

Q 12/30 25 min Hint

Q :

A scientist arranged myoglobin into proper order of its amino acids and calculated total amino acids in this molecule. He actually figured out:

A Primary structure of myoglobin

B Secondary structure of myoglobin

C Tertiary structure of myoglobin

D Quaternary structure of myoglobin

7 8 9 10 11 12 13

24 : 05

Q 13/30 25 min Hint

Q : Which amino acid is essential for formation of disulphide linkages in proteins?

A Glycine

B Alanine

C Serine

D Cysteine

7 8 9 10 11 12 13

24 : 01

Q 14/30 25 min Hint

Q : These are the group of lipids which are specialized for energy storage:

A Acylglycerols

B Phospholipids

C Waxes

D Terpenoids

23 : 59

Q 15/30 25 min Hint

Q : Variability among different types of acylglycerols is due to:

A Glycerols

B Fatty acids

C Ketones

D Isoprenoid

11 12 13 14 15 16 17

23 : 57

Q 16/30 25 min Hint

Q : It is not a component of phosphatidic acid:

A Glycerol

B Fatty acid

C Phosphoric acid

D Nitrogenous base

11 12 13 14 15 16 17

23 : 55

Q 17/30 25 min Hint

Q : They are widespread in living organisms and are frequently associated with membranes:

A Acylglycerols

B Phospholipids

C Waxes

D Terpenoids

23 : 51

Q 18/30 25 min Hint

Q : Which of the following represent high energy bonds in ATP?

A Ribose – Adenine

B Ribose – Phosphate

C Phosphate – Adenine

D Phosphate – Phosphate

7 18 19 20 21 22 23 24

23 : 49

Q 19/30 25 min Hint

Q : How many water molecules are released during formation of an ATP molecule?

A 1

B 2

C 3

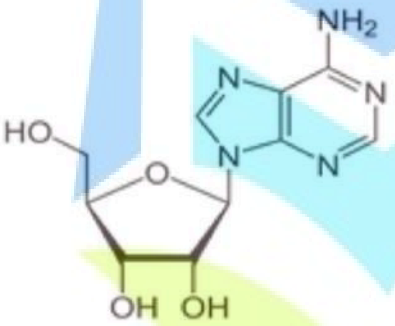
D 4

7 18 19 20 21 22 23 24

23 : 47

Q 20/30 25 min Hint

Q :
Which one is correct about the following diagram?



A It is a nucleotide

B It contains pyrimidine nitrogen

C It is used to form DNA

D It is used to form RNA

23 : 45

Q 21/30 25 min Hint

Q : Which statement correctly describes messenger RNA (mRNA)?

A mRNA binds amino acids for incorporation into proteins

B mRNA contains the five-carbon sugar deoxyribose

C mRNA is a double stranded helix

D mRNA recognizes the anticodon of tRNA

23 : 42

Q 22/30 25 min Hint

Q : Two different molecules, belonging to two different categories, usually combine together to form _____:

A Micro-molecules

B Conjugated molecules

C Amphoteric molecules

D Zwitter ions

23 : 40

Q 23/30 25 min Hint

Q : It is true for enzymes:

A Without enzymes, the metabolism would be very slow

B Enzymes initiate the reaction

C The reactants are substrate and enzyme

D All enzymes require co-factor

23 : 37

Q 24/30 25 min Hint

Q : When apoenzyme is separated from its metal component, its activity is:

A Decreased

B Lost

C Increased

D Remains unaffected

23 : 35

Q 25/30 25 min Hint

Q : Majority of the amino acids in enzyme molecule:

A Form their active sites

B Form their allosteric sites

C Maintain globular shape of enzyme

D Maintain shape of active site

23 : 33

Q 26/30 25 min Hint

Q : Specificity of enzyme was first proposed by:

A Koshland

B Watson

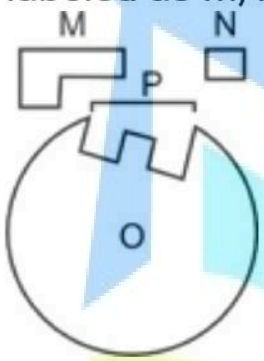
C F. Griffith

D E. Fischer

23 : 27

Q 27/30 25 min Hint

Q : In the given diagram, identify the parts labeled as M, N, O and P:

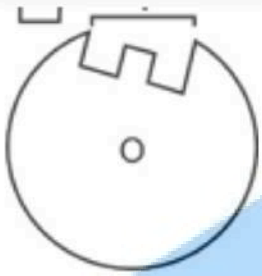


A
M
N
O
P
Product Substrate
Enzyme Co-enzyme

B
M
N
O
P
Active site Product
Substrate Co-enzyme

C
M
N
O
P
Substrate Co-enzyme
Enzyme Active site

23 : 24



A
M
N
O
P
Product
Substrate
Enzyme
Co-enzyme

B
M
N
O
P
Active site
Product
Substrate
Co-enzyme

C
M
N
O
P
Substrate
Co-enzyme
Enzyme
Active site

D
M
N
O
P
Enzyme
Inhibitor
Activator
Product

23 : 22

Q 28/30 25 min Hint

Q : The rate of reaction depends directly on the amount of enzyme present at a specific time at:

A Limited substrate concentration

B Unlimited enzyme concentration

C Unlimited substrate concentration

D Limited enzyme concentration

23 : 20

Q 29/30 25 min Hint

Q : Which of the followings is never inhibitor?

A Substrate

B ATP

C Product

D Antibiotic

23 : 17

Q 30/30 25 min Hint

Q : Malonic acid is an example of reversible inhibitor; it inhibits succinic acid dehydrogenase by:

A Forming weak linkage with active site

B Forming weak linkage with allosteric site

C Forming covalent bond with active site

D Forming covalent bond with allosteric site

QUIZ RESULT

Unit Wise Test-2 (Biological Molecules and Enzymes)

30

25 min

22-Feb-2021

0 sec

0/30

0.0%

Result Detail

Correct
Unattempted
Incorrect
Q 1/30

Q : Most abundant component of the cell is:

A Proteins

B Lipids

C Carbohydrates

D Water

Explanation

Water is most abundant component of any cell. Proteins are most abundant organic compounds.

Correct Unattempted

Incorrect Q 2/30

Q : Living organisms use water as thermo-stabilizer, due to its _____ property:

A Heat of vaporization

B Heat capacity

C Heat of sublimation

D Heat of ionization

Explanation

Water absorb large amount of heat without changing its temperature.

Correct
Unattempted
Incorrect
Q 3/30

Q : Water flows freely without breaking apart due to its:

A Adhesive force

B Suspended force

C Cohesive force

D Additive force

Explanation

Rapid formation, dissociation, and reformation of hydrogen bonding maintains the fluidity of water.

Correct
Unattempted
Incorrect
Q 4/30

Q : It is not a carbohydrate:

A Starch

B Glycogen

C Chitin

D Cutin

Explanation

Cutin is one of the two waxy polymers that are the main components of the plant cuticle, which covers all aerial surfaces of plants.

Correct Unattempted

Incorrect Q 5/30

Q : Number of carbon atoms within the ring of ribo-furanose is:

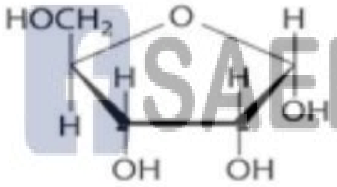
A 6

B 5

C 4

D 3

Explanation



Correct Unattempted

Incorrect Q 6/30

Q : Monosaccharides are major components of:

A DNA, ATP, Ribulose biophasphate and cysteine

B DNA, NAD and Insulin

C DNA, NADP, ATP and ribulose bisphosphate

D DNA, RNA and myosin

Explanation

1. Cystein is amino acid.
2. Insulin contains amino acids.
3. Myosin contains amino acids.

Correct
Unattempted
Incorrect
Q 7/30

Q : Milk sugar is a/an:

A Monosaccharide

B Oligosaccharide

C Disaccharide

D Polysaccharide

Explanation

Lactose is milk sugar and disaccharide.

Correct
Unattempted
Incorrect
Q 8/30

Q : It is a nitrogen containing polysaccharide:

A Starch

B Glycogen

C Cellulose

D Chitin

Explanation

Basic unit of chitin is N-acetyl β-glucosamine.

Correct
Unattempted
Incorrect
Q 9/30

Q : It is an example of globular protein:

A Myosin

B Fibroin

C Fibrinogen

D Keratin

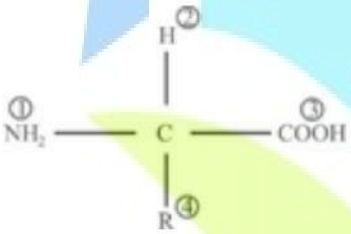
Explanation

- Fibroin is silk protein.
- Fibrinogen is globular while fibrin is fibrous.

Correct Unattempted

Incorrect Q 10/30

Q :
An amino acid molecule has the following structure:



Which two of the groups combine to form a peptide link?

A 1 and 2

B 1 and 3

C 2 and 3

D 3 and 4

Correct
Unattempted
Incorrect
Q 11/30

Q : A protein is always _____ in nature:

A Fibrous

B Polypeptide

C Pentapeptide

D Hydrophobic

Explanation

- Proteins can be fibrous or globular.
- Proteins is always polypeptide.
- Protein has both hydrophilic and hydrophobic parts

Correct Unattempted

Incorrect Q 12/30

Q :

A scientist arranged myoglobin into proper order of its amino acids and calculated total amino acids in this molecule. He actually figured out:

A Primary structure of myoglobin

B Secondary structure of myoglobin

C Tertiary structure of myoglobin

D Quaternary structure of myoglobin

Explanation

Primary structure is related with number and sequence of amino acids in a polypeptide chain.

Correct
Unattempted
Incorrect
Q 13/30

Q : Which amino acid is essential for formation of disulphide linkages in proteins?

A Glycine

B Alanine

C Serine

D Cysteine

Explanation

Cysteine is sulpher containing amino acid.

Correct
Unattempted
Incorrect
Q 14/30

Q : These are the group of lipids which are specialized for energy storage:

A Acylglycerols

B Phospholipids

C Waxes

D Terpenoids

Explanation

Triglycerides are main energy reserves in living organisms.

Correct Unattempted

Incorrect Q 15/30

Q : Variability among different types of acylglycerols is due to:

A Glycerols

B Fatty acids

C Ketones

D Isoprenoid

Explanation

Glycerol is same in all acylglycerols while they vary on base of type of fatty acid.

Correct
Unattempted
Incorrect
Q 16/30

Q : It is not a component of phosphatidic acid:

A Glycerol

B Fatty acid

C Phosphoric acid

D Nitrogenous base

Explanation

Phosphatidic acid contains 1 glycerol, 2 fatty acids and 1 phosphoric acid.

Correct
Unattempted
Incorrect
Q 17/30

Q : They are widespread in living organisms and are frequently associated with membranes:

A Acylglycerols

B Phospholipids

C Waxes

D Terpenoids

Explanation

Phospholipids form lipids form lipid bilayer in all types of membranes in prokaryotic and eukaryotic cells.

Correct Unattempted

Incorrect Q 18/30

Q : Which of the following represent high energy bonds in ATP?

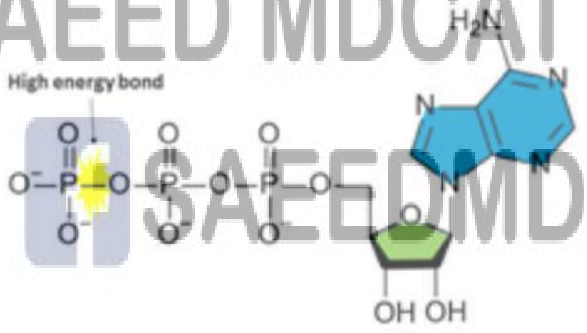
A Ribose – Adenine

B Ribose – Phosphate

C Phosphate – Adenine

D Phosphate – Phosphate

Explanation



Correct Unattempted

Incorrect Q 19/30

Q : How many water molecules are released during formation of an ATP molecule?

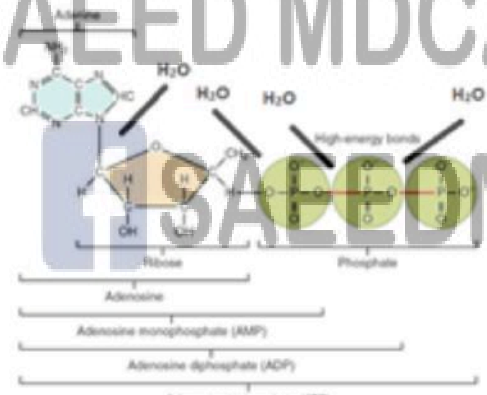
A 1

B 2

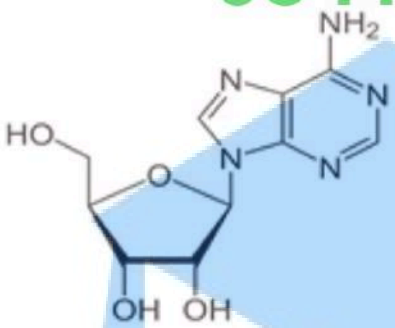
C 3

D 4

Explanation



diagram?



A It is a nucleotide

B It contains pyrimidine nitrogen

C It is used to form DNA

D It is used to form RNA

Explanation

- It is a nucleoside as it does not contain phosphate group.
- It is used to form RNA as it contains ribose sugar.

Incorrect

Q 21/30

Q : Which statement correctly describes messenger RNA (mRNA)?

A mRNA binds amino acids for incorporation into proteins

B mRNA contains the five-carbon sugar deoxyribose

C mRNA is a double stranded helix

D mRNA recognizes the anticodon of tRNA

Explanation

tRNA binds with amino acid instead of mRNA.

A) mRNA contains ribose instead of deoxyribose.

B) mRNA is always single stranded and does not form helix.

Correct Unattempted

Incorrect Q 22/30

Q : Two different molecules, belonging to two different categories, usually combine together to form _____:

A Micro-molecules

B Conjugated molecules

C Amphoteric molecules

D Zwitter ions

Explanation

Conjugated molecules are formed when a chemical bond is established between two different molecules, belonging to two different categories.

Correct
Unattempted
Incorrect
Q 23/30

Q : It is true for enzymes:

A Without enzymes, the metabolism would be very slow

B Enzymes initiate the reaction

C The reactants are substrate and enzyme

D All enzymes require co-factor

Explanation

A) Enzymes do not initiate reactions instead catalyze already occurring reactions.

B) Enzyme in a reaction acts as catalyst instead of reactant.

C) Co-factor is required by few enzymes.

Correct Unattempted

Incorrect Q 24/30

Q : When apoenzyme is separated from its metal component, its activity is:

A Decreased

B Lost

C Increased

D Remains unaffected

Explanation

Holoenzyme (Activated Enzyme) – Co-Factor = Apoenzyme (Inactive Enzyme)

Correct Unattempted

Incorrect Q 25/30

Q : Majority of the amino acids in enzyme molecule:

A Form their active sites

B Form their allosteric sites

C Maintain globular shape of enzyme

D Maintain shape of active site

Explanation

One enzyme can be having minimum thousand amino acids in numbers and 3–12 are only +ve part of active site.

Correct Unattempted

Incorrect Q 26/30

Q : Specificity of enzyme was first proposed by:

A Koshland

B Watson

C F. Griffith

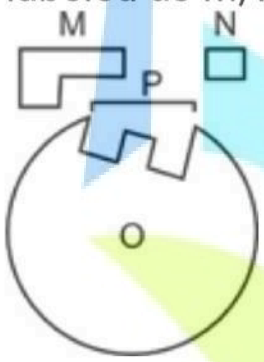
D E. Fischer

Explanation

Both models emphasize on specificity of enzymes.

Correct
Unattempted
Incorrect
27/30

Q : In the given diagram, identify the parts labeled as M, N, O and P:



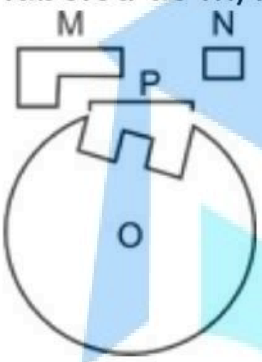
A
M
N
O
P
Product Substrate
Enzyme Co-enzyme

B
M
N
O
P
Active site Product
Substrate Co-enzyme

M
N
O

Incorrect

Q : In the given diagram, identify the parts labeled as M, N, O and P:



A
M
N
O
P
Product Substrate
Enzyme Co-enzyme

B
M
N
O
P
Active site Product
Substrate Co-enzyme

C
M
N
O
P
Substrate Co-enzyme
Enzyme Active site

Correct
Unattempted
Incorrect
Q 28/30

Q : The rate of reaction depends directly on the amount of enzyme present at a specific time at:

A Limited substrate concentration

B Unlimited enzyme concentration

C Unlimited substrate concentration

D Limited enzyme concentration

Explanation

At unlimited substrate concentration, rate of reaction depends upon enzyme.

Correct Unattempted

Incorrect Q 29/30

Q : Which of the followings is never inhibitor?

A Substrate

B ATP

C Product

D Antibiotic

Explanation

- Reaction product and ATP are involved in feedback inhibition.

Antibiotics act as inhibitors of bacterial enzymes.

Correct Unattempted

Incorrect Q 29/30

Q : Which of the followings is never inhibitor?

A Substrate

B ATP

C Product

D Antibiotic

Explanation

- Reaction product and ATP are involved in feedback inhibition.

Antibiotics act as inhibitors of bacterial enzymes.

Incorrect Q 20/30

Q : Malonic acid is an example of reversible inhibitor; it inhibits succinic acid dehydrogenase by:

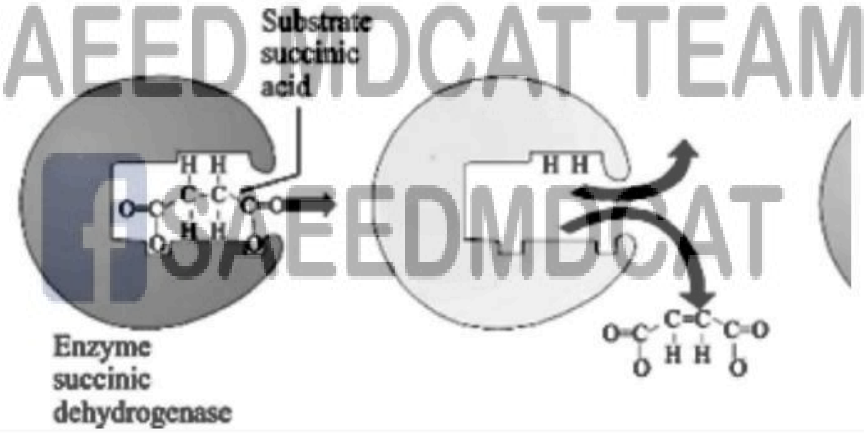
A Forming weak linkage with active site

B Forming weak linkage with allosteric site

C Forming covalent bond with active site

D Forming covalent bond with allosteric site

Explanation



Incorrect 20/30

Q : Malonic acid is an example of reversible inhibitor; it inhibits succinic acid dehydrogenase by:

A Forming weak linkage with active site

B Forming weak linkage with allosteric site

C Forming covalent bond with active site

D Forming covalent bond with allosteric site

Explanation